# 300VA, IP66-Rated, Rugged, Industrial Quality DC-AC Sine Wave Inverter CSI 300-D3 Series (IP66)

- Sinusoidal output voltage
- Packaged in a waterproof IP66 enclosure
- Cooling by conduction and natural convection
- Internal module ruggedized and conformal coated
- Rugged, field-proven design
- Filtered input/output
- Full electronic protection



This rugged, industrial quality DC/AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output power, with pure sign wave output voltage. The units are packaged in waterproof, robust die cast aluminum IP66 enclosures. The input and output are via sealed cable glands or circular connectors. The internal boards are ruggedized and conformal coated for increased immunity to high levels of shock and vibration. Cooling is by internal conduction to the walls of the IP66 enclosure and via baseplate to an external chassis, cabinet wall, or heatsink. Additional cooling is achieved by natural convection via the surface of the IP66 enclosure. This enables operation within the specified temperature range for full specification. The high frequency conversion enables a compact construction and high efficiency. The input and output are filtered for low noise. Full electronic protection, low component count, large design headroom, and the use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control. Customized versions are available. The design is suitable for transportation, mining, marine, oilrigs, military and other harsh environments.

# **SPECIFICATIONS**

#### **Input Voltage**

24Vdc, 48Vdc, 110Vdc or 125Vdc Consult factory for other input voltages and ranges

#### **Input Protection**

Inrush current limiting
Varistor
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified
minimum input will not damage
the unit

#### Isolation

1700Vdc input to chassis/output or corresponding to the voltage requirements Isolated floating output

# Standards

Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN 60950-1

#### FMI

EN 55022 Class A with margins

#### **Output Voltage**

continuous; or 230Vac @ 50Hz/1.3Arms continuous Isolated floating output Consult factory for other output requirements

115Vac @60Hz or 400Hz/2.6Arms

### **Output Wave Form**

Sinusoidal

## **Total Harmonic Distortion**

Less than 5% at full load

#### Line/Load Regulation

 $\pm$  3% from no load to full load.

#### **Load Crest Factor**

2 at 90% load

# **Output Noise**

High frequency ripple is less than 500mVrms (20MHz BW)

# **Output Overload Protection**

Current limiting with short circuit protection
Thermal shutdown with automatic

Thermal shutdown with automati recovery in case of insufficient cooling

# **Output Overvoltage Protection**

140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting

# **Efficiency**

Typically 80% at full load Dependent on input/output combination

# **Operating Temperature**

-25 to +55°C temperature for full specification Contact factory for extended temperature range

## **Temperature Drift**

0.05% per C over operating temperature range

#### Cooling

Conduction to customer heat-sink or chassis. Additional natural convection via the surface of the IP66 enclosure

#### **Environmental Protection**

IP66 enclosure Internal module is ruggedized and conformal coated Potting of the internal module is also available

## Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5-100% condensing

#### MTBF

140,000 hours at 45 °C Demonstrated MTBF is significantly higher

# Indicators

None

# **Control Input**

None

# **Alarm Output**

Not installed Optional output Fail Alarm

# Package/Dimensions (L x W x H)

D3 with baseplate: 406 x 160 x 90 mm (16.1" x 6.3" x 3.5") Without baseplate: 360 x 160 x 90 mm 14.1" x 6.3" x 3.5"

# Weight

4.6 kg (10 lb)

### **Connections**

Internal barrier-type terminal block accessible via sealed cable glands. Optional connectors instead of cable glands

### **RoHS Compliance**

Compliant

# Warranty

Two years subject to application within good engineering practice

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

OEM of professional quality AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility



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